

The Scientific Models in Adaptive Management Edition

Note to Educators

The Forest Service's mission is to sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations. For more than 100 years, our motto has been caring for the land and serving people. The Forest Service, U.S. Department of Agriculture (USDA), recognizes its responsibility to be engaged in efforts to connect youth to nature and to promote the development of science-based conservation education programs and materials nationwide.

The *Natural Inquirer* is a science education resource journal to be used by students in grade 5 and up. The *Natural Inquirer* contains articles describing environmental and natural resource research conducted by Forest Service scientists and their cooperators. These scientific journal articles have been reformatted to meet the needs of middle-school students. The articles are easy to understand, are aesthetically pleasing to the eye, contain glossaries, and include hands-on activities. The goal of the *Natural Inquirer* is to stimulate critical reading and thinking about scientific inquiry and investigation while teaching about ecology, the natural environment, and natural resources. In this edition of the *Natural Inquirer*, you will find four articles on scientific models in adaptive management written in the scientific method format.

The Format of a Natural Inquirer Article

Each *Natural Inquirer* article follows the same format. *Natural Inquirer* articles are written directly from a published science article, and all have been reviewed by the scientists for accuracy. Each article contains the following sections, which you may introduce to your students as they read:

Meet the Scientists: Introduces students to the scientists who did the research. This section may be used in a discussion about careers in science.

What Kinds of Scientists Did This Research: Introduces different scientific careers to students by describing the discipline of scientists involved in the research.

Thinking About Science: Introduces something new about the scientific process, such as a scientific habit of mind or procedures used in scientific studies.

Thinking About the Environment: Introduces the environmental topic being addressed in the research.

Science Education Standards and Evaluations

In the back of the journal, you will find a matrix that enables you to identify articles by the national science education standards and national social studies education standards that they address. On the *Natural Inquirer's* Web site, you will find a more detailed exhibit of the standards addressed in each article, including Common Core State Standards and Next Generation Science Standards. Evaluation forms for both educators and students are available on our Web site. We welcome any feedback so please visit <http://www.naturalinquirer.org> and complete the online evaluation forms. In addition, you may contact Dr. Barbara McDonald at the following address with any comments you may have.

Dr. Babs McDonald
USDA Forest Service
320 Green Street
Athens, GA 30602-2044
706.559.4224
bmcdonald@fs.fed.us

(Please put "Educator Feedback" in the subject line.)

Introduction: Introduces the problem or question being addressed by the research.

Method: Describes the method used by the scientists to collect and analyze their data.

Findings: Describes the results of the analysis.

Discussion: Discusses the findings and places them into the context of the original problem or question.

Reflection Section: Presents questions aimed at stimulating critical thinking about what has been read or predicting what might be presented in the next section. The Reflection Section is placed at the end of each of the main article sections.

Number Crunch: Presents an easy math problem related to the research.

Glossary: Defines potentially new scientific (Tier 3) or Tier 2 words to students. The first occurrence of a glossary word is **bold** in the text.

Citation: Gives the original article citation and, if available, a Web link to the original article.

FACTivity: Presents a hands-on activity that emphasizes something presented in the article.

Educator Resources

Visit the *Natural Inquirer* Web site at <http://www.naturalinquirer.org>.

From this site, you can order more free editions; read and download lesson plans, word games, and other resources to help you use *Natural Inquirer* in your classroom; and view and download a yearlong lesson plan aimed at helping your students learn about the scientific process.